

REMARKS

Claims 1-13 are pending in the application. Claims 1-13 are rejected.

Claims 1, 5, 9, and 11 were rejected under 35 U.S.C. § 102(e) as being unpatentable over McCanne.

Claims 2-4, 6-8, 10, 12 and 13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over McCanne in view of Ylonen et al.

The rejection of claims 1-13 is being herein respectfully traversed for at least the following reasons:

Regarding independent claims 1, 5 and 9:

Applicant's independent claims 1, 5, and 9 include a similar feature of generating and multicasting control packets each having set a multicast address predetermined per virtual network.

It appears McCanne discloses that a multicast sender signals to an overlay multicast network a channel that the sender intends to use.

It is to be noted that terms "native network" and "overlay network" used by McCanne respectively correspond to "public data communication network" and "virtual network" in the present invention of independent claims 1, 5 and 9.

In this respect, McCanne fails to disclose that the control packets each having set a multicast address predetermined per virtual network are transmitted over the native network (=public data communication network), as claimed in applicant's claim 1.

In addition applicant's independent claims 1, 5, and 9 include a similar feature of the virtual links are established between all of the first and the second relaying apparatuses belonging to the multicast address group.

In contrast, McCanne merely discloses that a designated router (one overlay router chosen by a distributed election algorithm) uses a well-known multicast address called a DGMP channel to transmit a query packet (see column 9, lines 38-40).

The present invention according to independent claims 1, 5 and 9 enable structuring of an overlay network (virtual network) for communications only between relaying apparatuses having the multicast address by establishing virtual links.

However, McCanne fails to disclose that "the virtual links are established between all of the first and the second relaying apparatuses belonging to the multicast address group."

And as pointed out above, McCanne fails to disclose "generating and multicasting control packets each having set a multicast address predetermined per virtual network" as recited in the present invention of independent claims 1, 5, and 9.

Accordingly, it is respectfully submitted that independent claims 1, 5 and 9 are patentably distinguished over McCanne and the rejection under 35 U.S.C. § 102(e) should be withdrawn.

Regarding claim 11 depending from claim 9:

As described in column 17, lines 35-38, McCanne discloses that a M-BGP routing table (=multicast RIB) is used exclusively to set up the bi-directional tree and once the tree state is established in the FIB, the RIB is not used for relaying packets. Therefore, it can be conceived that the RIB is not a routing table used for relaying packets, and that a border router uses only the FIB for relaying packets.

Although McCanne discloses in column 17, lines 30-35 and lines 41-42 that the FIB is constructed from join/leave BGMP messages, McCanne fails to disclose that the RIB is "a

routing table for each of a plurality of virtual networks logically independent of one another" as particularly claimed by the applicant.

Applicant's claim 9 features enable use of duplicated addresses in different virtual networks by having a routing table for each of a plurality of virtual networks logically independent of one another.

Accordingly, it is respectfully submitted that independent claim 9 and dependent claim 11 are patentably distinguished over McCanne and the rejection under 35 U.S.C. § 102(e) should be withdrawn for at least the foregoing reasons.


Regarding claims 2-4, 6-8, 10, 12, and 13:

It is respectfully submitted these dependent claims include at least the feature of their respective base claims and additional distinguishing features. Because Ylonen et al. fail to teach the features lacking in McCanne it is respectfully submitted the combination of references fail to teach or suggest each claimed feature and the claims are patentable over McCanne in view of Ylonen et al.

In view of the remarks set forth above, this application is in condition for allowance which action is respectfully requested. However, if for any reason the Examiner should consider this application not to be in condition for allowance, the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged to Deposit Account No. 50-1290.

Respectfully submitted,


Brian S. Myers
Reg. No. 46,947

CUSTOMER NUMBER 026304
Telephone: (212) 940-8703
Fax: (212) 940-8986 or 8987
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